STATISTICAL BULLETIN
Metropolitan Life Insurance Co.

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THE OUTLOOK FOR PUBLIC HEALTH ON THE PACIFIC COAST.

Public health work on the Pacific Coast has been hampered for many years. Health officers have had a very hard time of it and what they have accomplished is to their great credit. Restricted in their activities by limited appropriations, they have also had to meet the organized opposition of groups who chose to be against public health work as usually practiced. Such opposition was, however, always covert; it never frankly challenged public health work in the open. The work of health officers was impeded through non-compliance with ordinances and through obstructive court proceedings wherever possible. A change has finally come. The anti-health forces, including those who are animated by sincere if misguided conviction, and those who profit financially from discrediting conservative health work, have at last felt strong enough politically to come out openly for a test of power. Public health work is engaged in a struggle for its very existence. The outcome is of interest not only to those concerned with the welfare of the Pacific Coast States but to every other health advocate in the United States and Canada.

The issue in California revolves around four amendments to the State Constitution, which are to be voted upon at the next election. Three of these are in the nature of initiatives, and one is a referendum. They are closely interrelated and the effect of the passage of these amendments would be to cripple the practice of public health work in the State. The amendment known as the Chiropractic Act would place the licensing of chiropractors under a board of examiners composed solely of such practitioners. The standards now required of chiropractors are low enough. The anti-vaccination amendment would take from the health authorities the scant police powers they now possess to keep from schools and other places of instruction, and from public offices, those who may disseminate smallpox and other diseases. The anti-vivisection amendment would prevent any experimentation on animals and would, in fact, stop the manufacture

of sera, vaccines and other biological products and would even interfere with the routine of diagnostic work in hospitals which require the use of laboratory animals. The fourth amendment is in the nature of a referendum and would return to "drugless" healers the right to administer drugs in their practice which the Legislature at the last session took from them in its effort to control the increase of drug addicts. This is the situation in California.

In Oregon, the voters will be called upon on Election Day to decide upon only one amendment, namely, the anti-vaccination measure which, if anything, is even more drastic than Amendment No. 6 of California. In this State, the proposed amendment would prohibit "vaccination, inoculation or other form of medication," as a condition of entrance or attendance at any school, college, educational institution, or as a condition of "the employment of any person in any capacity, or for the exercise of any right, the performance of any duty or the enjoyment of any privilege" and would repeal all provisions, constitutional, statutory, municipal, of charter or ordinance, in conflict with it. As "medication" would, in all likelihood, include any sanitary measure which a health officer might exercise in the performance of his duties, the effect of the passage of this amendment would be to prevent the removal and isolation of any person suffering from smallpox in a lumber camp or of a child sick with diphtheria and attending school, or of a teacher in an advanced stage of tuberculosis at work among his or her pupils.

The programme of the opponents of public health work in California and Oregon is no less than to pass these several measures. Much money has been collected and intensive publicity has been directed to attain these ends. But, in spite of the interest in the larger issues of the Presidential campaign, the people of California and Oregon are becoming aware of the danger that is threatening. The medical profession, the women's clubs, the civic organizations, the more influential newspapers, and especially the life insurance companies, have prepared to meet the issue. The Metropolitan Life Insurance Company, with its half million policy-holders on the Coast, whose health and very life is threatened by these measures, has arranged to apprize these policy-holders and the general public of the true situation. A half million leaflets will be distributed in California and one hundred thousand in Oregon. These will urge policy-holders and other citizens to defeat the anti-vaccination amendments. The large agency force of the Company operating in these two States has been aroused to cooperate in a campaign of house-to-house instruction on the issues involved. The result should be the defeat of the several amendments, so overwhelming that

their proponents will not again raise their voices politically. The Pacific Coast, true to its best interests, must not undo the great blessings with which nature has endowed it and through misdirection make itself a place to be shunned by the rest of the country. California and Oregon can be counted on to vindicate the well-tried principles of public health work and later to strengthen the now defective machinery of health protection for their people.

WHY TOLERATE DIPHTHERIA?

Diphtheria has been especially prevalent this year. During the first nine months, the rate in the Industrial Department of this Company was 18.8 per 100,000 persons, which is 7.4 per cent. higher than for the corresponding period last year. Even during the summer months, July to September, when the lowest rates usually occur, there were many deaths from diphtheria in this experience, the rate being 12.2 per 100,000. The indications are that there will be a very high diphtheria death rate during the coming winter, when this disease normally reaches its maximum. The question is whether communities will permit a high toll of children's lives to be taken, or will address themselves to more active measures of control. Communities now have a complete defense against diphtheria and there is no reasonable excuse for the present unfavorable situation.

Public health officers have two valuable agencies of diphtheria control at their disposal. The first is to popularize the use of anti-toxin early in the treatment of such cases as occur. Physicians should be told of the impending danger during the coming winter and should be urged to utilize anti-toxin, which in many cases can be obtained free from departments of health. The second agency is the more extensive discovery in each community of children who are especially susceptible to diphtheria infection. This can be accomplished through the Schick test. Such cases should then receive the inoculation of toxin-anti-toxin which will convert susceptible children into immunes. The programme is quite clear.

It is the purpose of this note to urge that health officers agitate for additional facilities to control diphtheria during the coming winter. Health officers should obtain proper publicity for the threatening menace and thus secure more adequate facilities for child protection. Now is the time to get the support of the local press, the medical profession, the school authorities, parent-teachers' associations and of individual parents for a campaign against one of the most serious causes of child sickness and mortality.

There is no excuse for high diphtheria rates at this time. Why tolerate diphtheria?

DEATH AS A FACTOR IN FAMILY DAMAGE.

In recent years, various governments have attempted to provide for widows and their young children in order to keep family units intact. Even with meagre provisions, large expenses are being incurred by widows' pension funds and similarly organized efforts for widows and their dependent children. Where mothers die and leave children with only the father to care for them, the social damage is almost as great. In such instances, some States attempt to place the child under responsible and well-chosen foster mothers. But in either case where children become dependent because of the death of the father or the mother, the social damage is serious; for it is in such cases that many children grow up badly and often become delinquents.

It seemed desirable, therefore, to collect data, even if in a preliminary way, to ascertain some of the facts of family damage when a married man or woman dies in wage earners' families. We have brought together the facts for the families where death occurred during the months of July and August, 1920, in the Industrial experience of this Company. There were 663 cases in all, of which 299 represented deaths of husbands leaving surviving wives and 364 deaths of wives leaving surviving husbands. There were 1,605 living children, or an average of 2.4 per family in all these cases. Thirty-four per cent. of the children were less than sixteen years of age, and 9 per cent. were under five years old. In 24 per cent. of the families, there were no children at all; in 37 per cent. of the families there were children under sixteen years of age and in the remainder, or 39 per cent., all the children were over sixteen years. In those cases where the parent was under 45 years at death, and leaving any children, the average number of such children under sixteen was 2.2 per family.

It is also of interest to know the causes which are responsible for the death of parents in these cases. We shall in this way learn how to place a value on public health work as a preventive of broken families. Thus, in the 244 cases having one or more living children under sixteen years of age, tuberculosis was responsible in 65 cases for the death of the parent, or in 27 per cent.; the diseases and conditions of the maternal state for 32 deaths, or in 13 per cent.; organic heart disease and Bright's disease for 21 deaths each, or 9 per cent.; and accidents for 19 deaths, or 8 per cent. Out of 14 accidental deaths of the father, 10 were due to work accidents. Public health work concerned with prevention of tuberculosis, of accidents and of maternal deaths has, therefore, a very important bearing upon the preservation of family ties. Public health activities should receive the support of social workers for the reason that such work

helps to safeguard the family and prevents the creation of problems which social agencies must later attempt to solve.

EFFECT OF CANCER UPON THE LENGTH OF LIFE.

The loss in years of average lifetime, due to the prevalence of cancers and of other malignant tumors among wage earners insured in this company has been computed. The study covered the experience of six years, from 1911 to 1916, among the millions of Industrial policy-holders. It was found that at birth the expectation of life of white males was reduced about three-fifths of a year, that of white females nearly 2 years, of colored males one-fourth of a year and of colored females seven-tenths of a year. The greatest damage is done among white females and the least among colored males. Among the latter the loss from cancer never amounts to more than a third of a year. It is a very remarkable fact that from age 1 to about age 55 the loss of expectation is practically uniform, varying between seven-tenths and eight-tenths of a year of life for white males; about one-third of a year for colored males; about one year for colored females.

The loss is from 2 to 2½ years for white females between 1 and 55 years of life. The maximum loss in expectation for both white females and colored females occurs about age 35. After that age, cancer exercises a diminishing influence upon the after-lifetime of females. The following table shows the loss in years of average after-lifetime among insured wage earners:

Number of Years of Average After-lifetime Lost on Account of Cancer—All Forms.

METROPOLITAN LIFE INSURANCE COMPANY.

INDUSTRIAL DEPARTMENT—1911 TO 1916.

AGE	WHITE		COLORED	
	Male	Female	Male	Female
0	0.62	1.93	0.24	0.71
1	0.70	2.12	0.30	0.85
2	0.72	2.17	0.32	0.90
3	0.73	2.19	0.33	0.92
4	0.73	2.21	0.33	0.93
5	0.72	2.23	0.33	0.95
15	0.73	2.29	0.33	0.98
25	0.75	2.41	0.32	1.05
35	0.79	2.48	0.33	1.08
45	0.80	2.42	0.33	0.94
55	0.73	2.23	0.26	0.68
65	0.53	0.85	0.17	0.43
75	0.39	0.40	0.02	0.28
85	0.30	0.22	0.07	0.17
95	0.17	0.10	0.05	0.01

Upon reference to data given on the effect of tuberculosis upon longevity in the February and March numbers of this BULLETIN, it will be seen that, after age 25, cancer causes a greater loss in expectation of life for white females than does tuberculosis. For white males, colored males and colored females, tuberculosis is throughout life the cause of much heavier loss in life expectancy than cancer. The economic and social importance of measures for cancer control among white females is evident.

SIGNIFICANCE OF ALBUMIN AND OF ALBUMIN AND CASTS IN THE URINE.

The Company has recently completed a study of the subsequent mortality of persons who were rejected for insurance because of the presence of albumin or of albumin and casts in the urine. In all these cases, the findings were determined by microscopic examination. The observations covered the rejections during the period 1905 to 1915, and the mortality experience was carried forward to the end of 1918.

CASES WITH ALBUMIN ONLY.

A study of the mortality of a group of over two thousand rejected applicants showed that the persistent presence of albumin is a serious defect. Taken as a group, these individuals showed, during an average period of six years, a mortality 24 per cent. in excess of that expected according to the American Experience Table. This is about twice as great as the mortality actually experienced on unimpaired lives. The gravity of the impairment increases with the age of the person at the time of the examination and the amount of albumin found. Those persons who showed a "faint trace" of albumin gave a subsequent mortality of 8 per cent. in excess of the American Experience Table under age 40 at the time of rejection, and of 32 per cent. over age 40. Those having a "trace" of albumin showed a mortality 9 per cent. in excess of the American Experience Table under age 40 and of 131 per cent. in excess over age 40.

CASES WITH ALBUMIN AND CASTS.

This group included over three thousand rejected applicants whose subsequent mortality was traced. The class was found to be much more seriously impaired than the first. Again, the gravity of the impairment increased with the age of the person at the time of examination and the amount of albumin found. Those having a "faint trace" of albumin with casts showed a mortality of 19 per cent. in excess of the American Experience Table under age 40 and 39 per cent. in excess of the table when over age 40. Those having a "trace" of albumin with casts showed a mortality rate 48 per cent. in excess under age 40 and 124 per cent. higher when over age 40. The

mortality rate of those found to have more than a "trace" of albumin with casts was about three times that expected by the American Experience Table.

As might be expected, Bright's disease figured very seriously in the mortality of these persons who had either albumin or albumin and casts in the urine. In the first group of two thousand persons, there were 37 deaths from Bright's disease in the period under observation. The normal mortality from this disease should have been between four and five deaths. The death rate from this disease, therefore, figured eight times greater than normal. In the group of three thousand persons with albumin and casts, there were 109 deaths from Bright's disease as compared with about 7 which would have occurred in a similar group of persons accepted for insurance. The mortality from Bright's disease was, therefore, more than 15 times the normal. In the latter group, heart disease was four times as prevalent, as was also the incidence of apoplexy and cerebral hemorrhage as causes of death.

These findings emphasize the significance of persistent albuminuria as a physical defect. Public health work should include in its programme the control of this condition. It is probable that the great majority of these applicants who were rejected for insurance were not aware of their serious renal impairment. The discovery of their condition at an earlier stage might have resulted in great benefit to them. The chief lesson of this study is, in fact, the value of periodic medical examination and the early detection of renal disturbance. The diseases of the heart, blood vessels, and kidney are best controlled by discovery in their early stages, by persistent follow-up work and the administration of proper hygienic measures, including the removal of foci of infection, the regulation of diet, the prescription of suitable exercise and adequate rest. These precautions will do much to prevent slight defects in function from developing later into the more serious forms of degenerative disease.

Departments of public health can play an important part in the control of these conditions through increasing facilities for periodic medical examinations and through educational work which will popularize better personal hygiene.

STUDY OF AMERICAN MUNICIPAL HEALTH DEPARTMENT PROCEDURE.

The Committee on Municipal Health Department Procedure of the American Public Health Association has already surveyed six of the Pacific Coast cities and in a few weeks will have surveyed six of the eastern cities. With the experience thus gained, a final

revision of the questionnaire is to be prepared. The Health Officers already visited have shown much interest in the questionnaire mentioned in the September STATISTICAL BULLETIN, and have gladly answered the list of questions, realizing that the completed report will be of inestimable value in making available to health officers throughout the country the methods in use in other cities. It is felt that the final report will make for greater uniformity in health department practice and will stimulate the introduction of new activities.

SOME PRACTICAL RESULTS OF MALARIA CONTROL MEASURES.

The mortality experience of insured wage earners with respect to malaria is a valuable index of the effectiveness of modern sanitary engineering in its attack upon this disease in the United States. Thus, in 1919, the malaria death rate in the Industrial Department of this Company was only 2.0 per 100,000. This is one-third of the death rate prevailing in 1911. Among insured colored persons, many of whom live in malarial areas of the South and Southwest, the mortality rate was 8 for males and 11 per 100,000 for females in 1919. In 1911, the rates were 21 and 31 per 100,000 for colored males and females, respectively.

Very substantial reductions have been accomplished in certain areas where malaria has shown an especially high death rate in the experience of the Company. Thus, during the three-year period, 1914 to 1916, in Macon, Georgia, our white policy-holders showed a rate of 29 per 100,000. In 1919, not a single malaria death was reported for these policy-holders. In and about Birmingham, Alabama, the rate for colored policy-holders was 36 per 100,000, in the three-year period 1914 to 1916, and 10 per 100,000 in 1919. In Little Rock, Arkansas, in the period 1914 to 1916, we experienced a malaria death rate of 161 per 100,000 among colored policy-holders and in 1919, a rate of 77 per 100,000. Among white policy-holders in this district the malaria rate was 33 in 1914 to 1916, and 19 per 100,000 in the year 1919. A number of instances of this kind can be quoted from our experience to show that in certain areas where malaria caused high mortality rates the situation is now well in hand. It is gratifying to give credit to the Federal, State, and private agencies which have been actively at work in the South and Southwest to control this cause of disability and of death. It is highly probable that this reduction of the death rate has been accompanied by a drop in the sickness rate and that this may be one of the important factors in the very marked improvement in the general death rate of colored persons in the Southern States during the last year or two.

The following table gives the malaria data for the Industrial Department of this Company between 1911 and 1919:

Mortality from Malaria by Color and Sex. Death Rates per 100,000 Exposed.

METROPOLITAN LIFE INSURANCE COMPANY

INDUSTRIAL DEPARTMENT—1911 TO 1919.

YEAR	PERSONS	WHITE		COLORED	
		Males	Females	Males	Females
1919	2.0	.9	1.0	8.1	11.2
1918	2.3	1.1	1.2	9.7	11.3
1917	2.3	1.1	1.3	8.6	12.4
1916	2.9	1.4	1.3	14.4	15.1
1915	3.5	1.7	1.8	14.3	17.7
1914	3.7	1.7	1.6	16.2	21.0
1913	4.5	2.1	1.8	20.5	23.5
1912	5.4	3.1	2.4	20.9	26.6
1911	6.1	3.2	3.0	21.2	30.6

MORTALITY RECORD OF SEPTEMBER, 1920.

The mortality rate for the month of September was lower than that of any month on record in the history of the Company. The rate for insured wage earners was 7.5 per 1,000. Tuberculosis had the especially low rate of 111 per 100,000, a figure never before recorded for this disease in the Industrial Department experience. The favorable condition this year with respect to tuberculosis, previously reported in these BULLETINS, is continuing and even improving. The death rate was low also for organic diseases of the heart, for cerebral hemorrhage, and for pneumonia, and the acute respiratory diseases. There was a significant decline in the death rate for diseases of the puerperal state, for suicides, and for accidents. Even the mortality from automobile accidents was slightly less in September than in the preceding month. Measles, scarlet fever, whooping cough and diphtheria each showed lower rates in September than in August. This group of diseases taken together accounts largely for the very low mortality rate of the month. Typhoid fever mortality increased. The rate for this disease is now very near its maximum for the year. A slight increase was observed for Bright's disease and for homicide.

The reports for cities in the general population of the United States show a practically stationary and very low death rate for September. An epidemic of acute anterior poliomyelitis occurred in Eastern Massachusetts. Cases began to develop late in July and the peak was reached during the last two weeks of September. Early in October the number of cases was reported to be on the decline.

The city of Boston seemed to be especially affected by this epidemic. During August and September, there were reported 397 cases in Massachusetts, and of these 195 occurred in Boston. There were 36 deaths. In case incidence, the epidemic was about half as severe as the one which occurred in 1916. The clinical type of the disease was like that of the outbreak of 1916 and occurred mostly among children of pre-school age. The few cases which occurred among adults were severe in their effects. The health authorities were well prepared and left nothing undone to control the situation.

A severe typhoid fever epidemic was reported from Seneca Falls, New York. The epidemic of this disease in St. Paul, Minnesota, reached the maximum point in September. The State of Connecticut has issued a special diphtheria bulletin, recommending preventive measures in anticipation of the usual winter and spring incidence of the disease. Another case of bubonic plague at Pensacola, Florida, brought the total up to ten for this year. Six of the cases proved fatal. The discovery of smallpox in West Philadelphia occasioned the quarantine and vaccination of almost 5,000 persons. One death from yellow fever—a case brought from Vera Cruz, Mexico—occurred at the quarantine station in Louisiana on September 23d. An anti-typhoid campaign in Mecklenburg County, North Carolina, was undertaken during the summer and nearly 6,000 persons submitted to vaccination. The South Carolina Anti-Tuberculosis Association expects to raise funds to maintain a traveling clinic in every county of the State. A new health journal is to be noted: that of the Maine Public Health Association. This journal shows promise of bringing health information effectively before the people.

The sanitary reports from other countries indicate a marked prevalence of certain communicable diseases. Typhus fever has affected nearly every home in Northeast Poland. An epidemic of dysentery has been reported from Southeast Latvia, Russia. There were 1,200 reported cases, with a mortality of 10 per cent. In Korea, approximately 13,000 cases of cholera occurred with 5,000 fatalities.

Yellow fever seems to be declining in Vera Cruz, Mexico, mainly as a result of the sanitary work of the United States Public Health Service. In the Island of Cyprus, during 1919, there were only 1,962 malaria cases reported as compared with 10,035 cases in 1912. This decreased prevalence of the disease is due to the anti-malaria measures adopted since 1912.

The number of smallpox cases in Glasgow is steadily increasing. Manchester, England, has several smallpox cases. In New York City, several steamers entering the harbor this summer and early in the autumn have been quarantined because of the presence of

smallpox on board. The United States Public Health Service has issued orders to its officers in European ports to vaccinate against smallpox all third-class passengers departing for the United States. The situation emphasizes the warning we gave against smallpox in the September issue of this BULLETIN. The United States will continue to be threatened with the importation of smallpox, and with the development of the disease from endemic centers within the United States where the practice of vaccination has been exceedingly lax. We would again stress the need for a campaign of publicity in favor of anti-smallpox vaccination, in order that the American population may be protected.

The following table gives the mortality data of the Industrial Department of this Company for the months of August and September, 1920, and for the whole year 1919:

METROPOLITAN LIFE INSURANCE COMPANY

Death Rates per 100,000 for Principal Causes, Premium-paying Business in Industrial Department.

MONTHS OF AUGUST AND SEPTEMBER, 1920.

CAUSE OF DEATH	RATE PER 100,000 LIVES EXPOSED		
	Sept. 1920	Aug. 1920	Year 1919
TOTAL—ALL CAUSES	750.5	817.9	1,063.0
Typhoid fever	10.9	8.2	7.3
Measles	1.4	3.2	3.5
Scarlet fever	1.9	3.2	3.9
Whooping cough	4.8	6.6	3.2
Diphtheria	12.0	12.1	20.9
Influenza	4.2	5.8	96.9
Tuberculosis (all forms)	111.3	120.1	156.5
Cancer	66.5	67.4	67.0
Meningitis (all forms)	5.4	6.1	6.4
Cerebral hemorrhage	47.7	51.0	59.8
Organic diseases of heart	90.0	95.0	113.9
Pneumonia (all forms)	26.1	31.7	117.2
Other respiratory diseases	11.3	12.1	17.0
Diarrhea and enteritis	27.8	30.2	16.9
Bright's disease	63.4	60.7	73.5
Puerperal state	15.9	20.0	20.0
Suicides	5.3	5.9	6.8
Homicides	8.4	6.8	6.9
Other external causes (excluding suicides and homicides)	58.9	76.2	80.4
Traumatism by automobile	13.4	14.5	10.7
War deaths	*	*	16.6
All other causes	177.3	195.5	184.9

*Less than .05 per 100,000.

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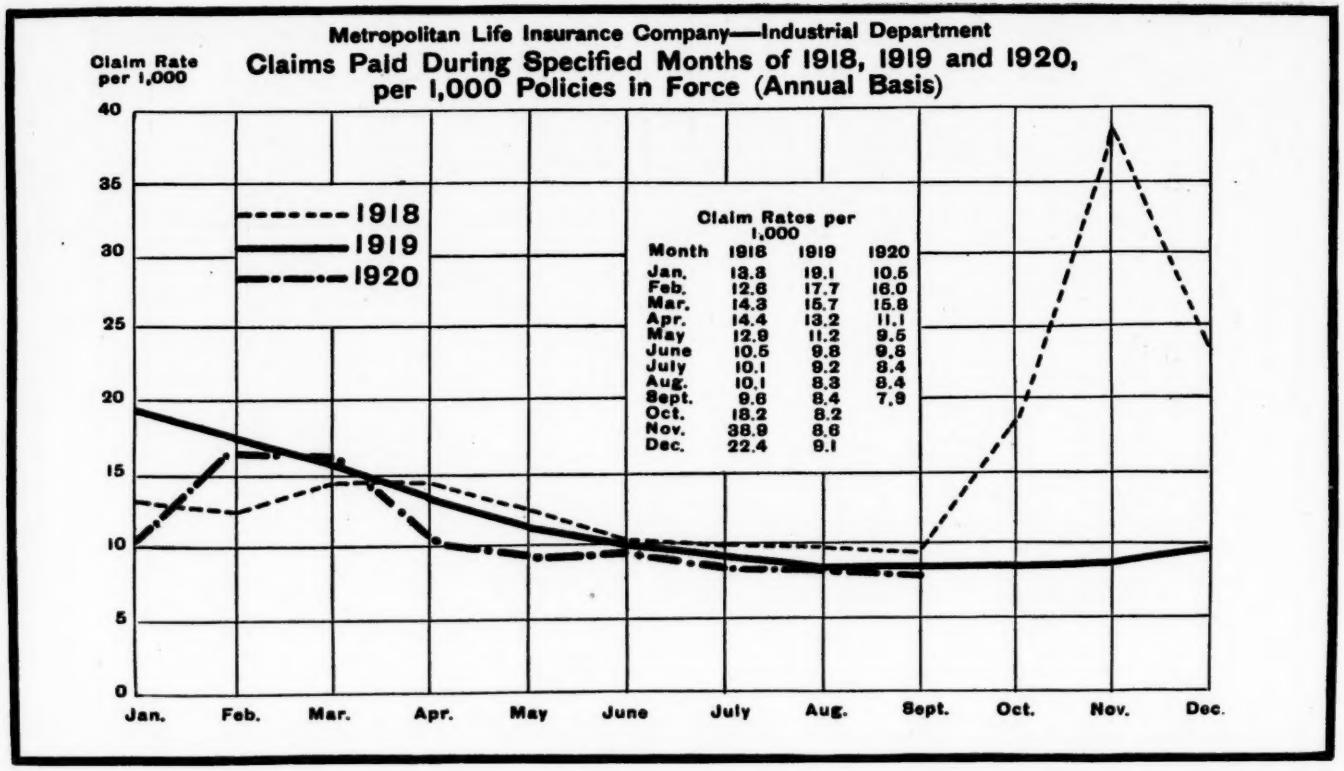
Metropolitan Life Insurance Company—Industrial Department
Claims Paid During Specified Months of 1918, 1919 and 1920, per 1,000 Policies in Force (Annual Basis)
Claim Rate per 1,000
40
35
30
25
20
15
10
5
0
1918
1919
1920
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
Claim Rates per 1,000
Month 1918 1919 1920
Jan. 13.3 19.1 10.5
Feb. 12.6 17.7 16.0
Mar. 14.3 15.7 15.8
Apr. 14.4 13.2 11.1
May 12.9 11.2 9.5
June 10.5 9.8 9.8
July 10.1 9.2 8.4
Aug. 10.1 8.3 8.4
Sept. 9.6 8.4 7.9
Oct. 18.2 8.2
Nov. 38.9 8.6
Dec. 22.4 9.1

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